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TECHNICAL NOTE

PLANTING AND TENDING RECOMMENDATIONS FOR RED OAK
(Quercus rubra L.)

WHERE TO PLANT: For best growth, plant in deep, fertile, moist, but well-drained loams or sandy loams. Oak will also grow in soils ranging from clay to those that are shallow and rocky, but well-drained. However, growth on these sites will be poor. Old fields may be suitable provided site preparation is carefully carried out.

WHERE NOT TO PLANT: In excessively dry or poorly drained soils. In uncultivated woodland cutovers.

SITE PREPARATION: In late August, before spring planting, spray 4.7 L/ha (0.5 gal/ac) of Vision (Roundup) over the whole area, or in strips and spots where intervening species are acceptable. Two weeks after spraying, plow and disk or rototill. Lower application rates may be effective on lesser competition and thus less expensive.

SPECIES MIXTURES: On intensively managed, highly productive sites, it is best to plant only the most valuable species for quality timber. The plantation is comparable to a fruit orchard. On other sites, a mixture of species may maximize soil productivity and meet a range of management objectives, e.g., red maple on wetter sites, sugar maple and birches on better drained sites.

Oak should not be grown in mixture with conifers, which provide habitat for rabbits. Even a few rabbits can persistently gnaw on bark and cut leading shoots, preventing most hardwoods from producing quality stems.

SPACING: There is no ideal spacing for planting all species on all sites. Spacing is therefore determined mostly by a compromise involving the space requirement of the crowns, the owner's objectives, and the cost of plantation establishment and tending. Trees grown at wide spacings generally grow faster in diameter, with heavier branching, than trees at closer spacing, which have better form. But spacing has little effect on height growth.

A spacing of 3 m (10 ft) between rows and 1.5 m (5 ft) within rows is recommended. This permits 2,200 trees/ha (870/ac) and allows access by a medium-sized tractor between rows for mechanical or chemical weed control. It promotes early canopy closure to shade out competing vegetation, and allows for some losses or culls.

Fig.1 Acorn

PLANTING STOCK: Two-year-old transplants, preferably p[illegible]r greenhouse +1 year container stock. Fall sowing of acorns in the nursery is simpler than cold moist stratification. Containers may be seeded and cold-stored under plastic until March germination.

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TIME OF PLANTING: In spring, as early as site conditions permit, and before flushing begins. After flushing, potted and container stock can be held until mid-June or mid-August. Avoid July and be prepared to water outplanted stock.

PLANTING METHOD: Pit (hole) planting with a spade.

WEED CONTROL AFTER PLANTING: Shortly after planting, spray 5.6 kg/ha (5 lb/ac) of Princep Nine-T (Simazine) over the area, strips or spots prepared for planting. In October of the first and second year, or April of the second and third year, spray 6.7 kg/ha (6 lb/ac) of Princep Nine-T. Where necessary continue spraying after the third year until the trees have outgrown the weed competition. Mechanical weed control by disking and mowing between the rows may be beneficial where chemical control is unacceptable, but is usually ineffective, often damaging tree root systems and encouraging sod formation.

RODENT CONTROL: Mice and rabbit problems may be controlled using poison grain bait stations and plastic tree shelter tubes around individual trees.

PRUNING: During the first five years, prune forked leaders and strong lateral branches to improve stem form. Thereafter, remove all the lowest branches every three to five years in September. Always leave a crown at least half the height of the tree.

J.C. Lees,
April 9, 1990

Fig. 2 Leaves have bristle-tipped lobes and teeth

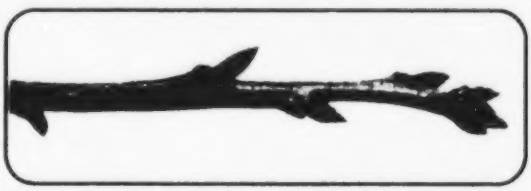

Fig. 3 Tips of buds are often hairy

Fig. 4 Mature bark has vertical pattern

Adapted with appreciation from "A guide to hardwood planting on abandoned farmland in southern Ontario" by F.W. von Althen, Forestry Canada - Ontario Region.

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